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NEWS 25	AUG 25	CA/Cplus, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS 26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
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FILE 'HOME' ENTERED AT 17:29:59 ON 29 AUG 2008

=> s "organic hydroperoxide" and emulsion and (separation or isolation or concentration)

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FILE 'CAPLUS' ENTERED AT 17:33:25 ON 29 AUG 2008  
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FILE COVERS 1907 - 29 Aug 2008 VOL 149 ISS 10  
FILE LAST UPDATED: 28 Aug 2008 (20080828/ED)

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=> s "organic hydroperoxide" and emulsion and (separation or isolation or concentration)  
420730 "ORGANIC"  
4058 "ORGANICS"  
423348 "ORGANIC"  
("ORGANIC" OR "ORGANICS")

1092647 "ORG"  
16948 "ORGS"  
1098864 "ORG"  
("ORG" OR "ORGS")  
1218725 "ORGANIC"  
("ORGANIC" OR "ORG")  
34669 "HYDROPEROXIDE"  
15828 "HYDROPEROXIDES"  
41256 "HYDROPEROXIDE"  
("HYDROPEROXIDE" OR "HYDROPEROXIDES")  
1527 "ORGANIC HYDROPEROXIDE"  
("ORGANIC" (W) "HYDROPEROXIDE")  
215857 EMULSION  
131688 EMULSIONS  
261414 EMULSION  
(EMULSION OR EMULSIONS)  
228047 SEPARATION  
8138 SEPARATIONS  
234658 SEPARATION  
(SEPARATION OR SEPARATIONS)  
628040 SEPN  
40555 SEPNS  
648578 SEPN  
(SEPN OR SEPNS)  
720987 SEPARATION  
(SEPARATION OR SEPN)  
279109 ISOLATION  
1359 ISOLATIONS  
279973 ISOLATION  
(ISOLATION OR ISOLATIONS)  
178646 CONCENTRATION  
75731 CONCENTRATIONS  
251979 CONCENTRATION  
(CONCENTRATION OR CONCENTRATIONS)  
2073796 CONCN  
1263946 CONCNS  
2870329 CONCN  
(CONCN OR CONCNS)  
2926664 CONCENTRATION  
(CONCENTRATION OR CONCN)  
L1 5 "ORGANIC HYDROPEROXIDE" AND EMULSION AND (SEPARATION OR ISOLATION OR CONCENTRATION)

=> d l1 abs ibib

L1 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
AB Free-flowing granular vinyl chloride polymers which form sols having excellent water resistance, thermal stability, transparency, and blooming resistance are obtained in high yield by emulsion polymerization of CH<sub>2</sub>:CHCl or its mixts. with other vinyl compds. in the presence of water-soluble catalysts or reductants, organic hydroperoxides, and maleic acid copolymer salt emulsifiers, followed by addition of water-insol. organic liqs. which do not dissolve or swell the polymer, and separation of the aqueous phase. Thus, 0.5 kg 30% PVC emulsion (average particle diameter 0.51  $\mu$ ) and 500 mg (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> were mixed under N with 3 kg CH<sub>2</sub>:CHCl at 50°, then cumene hydroperoxide and maleic anhydride-Me vinyl ether copolymer monopotassium salt (I) were added. After 16 h the resulting emulsion was diluted with H<sub>2</sub>O and stirred with di-2-ethylhexyl phthalate (II), then the polymer was filtered out and dried at 30° for 15 h to give granular PVC in 99% yield. The granular product showed repose angle 34° and bulk d. 0.52 g/cm<sup>3</sup>; vs. 54° and 0.30 g/cm<sup>3</sup> for powdered PVC obtained by spray drying the

emulsion. A sol of the granular PVC, II, and Ba/Zn stabilizers showed better fineness, blooming resistance, and thermal stability than a sol of the spray-dried PVC.

ACCESSION NUMBER: 1987:5951 CAPLUS  
DOCUMENT NUMBER: 106:5951  
ORIGINAL REFERENCE NO.: 106:1095a,1098a  
TITLE: Manufacture of granular PVC for pastes  
INVENTOR(S): Nishina, Masaaki; Nakano, Akira  
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61188402	A	19860822	JP 1985-29823	19850218
JP 03067521	B	19911023		
PRIORITY APPLN. INFO.:			JP 1985-29823	19850218

=> d 11 2-5 abs ibib

L1 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
AB Free-flowing granular vinyl chloride polymers which form sols having excellent thermal stability, transparency, and water resistance are obtained in high yield by emulsion polymerization of CH<sub>2</sub>:CHCl or its mixts. with other vinyl compds. in the presence of water-sol catalysts and/or reductants, organic hydroperoxides, and emulsifier compns. of sulfonates, organic sulfates, and/or C8-22 fatty acid esters, and salts of maleic acid copolymers, followed by addition of water-insol. organic liqs. that do not dissolve or swell the polymer, and separation of the aqueous phase. Thus, 0.5 kg 30% PVC emulsion (average particle diameter 0.5  $\mu$ ), 1 g NaOH, and 4 g (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> were mixed under N and stirred with 3 kg CH<sub>2</sub>:CHCl at 50° for 1 h, then an emulsifier mixture of Na polyoxyethylenlauryl sulfate 15, H<sub>2</sub>O 600, and maleic anhydride-Me vinyl ether copolymer diammonium salt (I) 15 g was added at 40 mL/h. After 16 h the emulsion was filtered, diluted with H<sub>2</sub>O, mixed with di-2-ethylhexyl phthalate (II) at 5 g/min for 1 h, then filtered out and dried at 30° for 15 h to obtain granular PVC in 98% yield. The granular product showed repose angle 33° and bulk d. 0.52 g/cm<sup>3</sup>; vs. 55° and 0.29 g/cm<sup>3</sup> for powdered PVC obtained by spray drying an emulsion prepared without the I. A sol of the granular PVC, II, and Ba/Zn stabilizers showed better fineness and thermal stability than one prepared from the spray-dried PVC.

ACCESSION NUMBER: 1987:5949 CAPLUS  
DOCUMENT NUMBER: 106:5949  
ORIGINAL REFERENCE NO.: 106:1095a,1098a  
TITLE: Manufacture of granular PVC for pastes  
INVENTOR(S): Nishina, Masaaki; Nakano, Akira  
PATENT ASSIGNEE(S): Nippon Zeon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 61188403	A	19860822	JP 1985-29824	19850218
JP 03067522	B	19911023		
PRIORITY APPLN. INFO.:			JP 1985-29824	19850218

L1 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AB The title compns. having high heat distortion temperature and gloss and good workability, mech. strength, and coloring property were prepared from (1) polybutadiene (in latex) grafted (degree of grafting 25-70%, backbone polymer: graft monomer 50-75:50-25) with 60-80:40-20 styrene-acrylonitrile in the presence of organic hydroperoxide -redox initiator system and (2) emulsion-polymerized 60-80:40-20 copolymer (relative viscosity 0.5-1.5, in DMF, concentration 1.0 g/l, 25.deg.) from aromatic vinyl monomers (styrene + 30-50%  $\alpha$ -methylstyrene) and acrylonitrile; the composition contained 5-30% backbone polybutadiene. For example, 60 parts (solid) polybutadiene latex (particle diameter 0.3  $\mu$ , gel content 80%) was mixed with 200 parts water (including water in the latex) and 1.0 part disproportionated K rosinate, heated to 60.deg., treated with Na formaldehyde sulfoxylate 0.093, FeSO4 0.005, and EDTA di-Na salt 0.01 part followed by styrene 28, acrylonitrile 12, cumene hydroperoxide 0.1, and tert-dodecyl mercaptan 0.1 part over 70 min, and polymerized for 90 min. to give butadiene-styrene-acrylonitrile graft copolymer (I) [9003-56-9] (degree of grafting 38.9%). A mixture of water 200, disproportionated K rosinate 1.0, and  $\alpha$ -methylstyrene 31.5 parts at 60.deg. was mixed with 0.5 part K2S2O8 for 15 min, and treated with a mixture of styrene 38.5, acrylonitrile 30.0, and the polymerization was

done

for 120 min to give styrene- $\alpha$ -methylstyrene-acrylonitrile copolymer (II) [9010-96-2] (relative viscosity 0.98). A I-II injection molding (polybutadiene backbone content 15%) containing 1 phr 3,5-di-tert-butyl-4-hydroxytoluene had tensile strength (yield strength) 540 kg/cm<sup>2</sup>, Izod notched strength 18.3 kg-cm/cm, heat distortion temperature 97.7.deg., and melt viscosity (240.deg., 100 kg/cm<sup>2</sup> load) 1.80 .tim. 104 P.

ACCESSION NUMBER: 1973:406112 CAPLUS

DOCUMENT NUMBER: 79:6112

ORIGINAL REFERENCE NO.: 79:1027a,1030a

TITLE: Thermoplastic compositions containing butadiene graft polymers

INVENTOR(S): Ono, Tomoyoshi; Kimura, Shigekazu; Kobota, Hiroaki

PATENT ASSIGNEE(S): Teijin Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 48004553	B4	19730120	JP 1971-35296	19710524

L1 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

AB Cyanoethylated amines (I) activate butadiene-acrylonitrile polymerization when K2S2O8 is used as initiator. A trace of Fe<sup>++</sup> ion enhances their effectiveness. More reactive amines are used at lower temps. I can also be used with organic hydroperoxide initiators, especially with dextrose as co-reducer. A study of varying the concentration of components of polymerization recipes indicates that an optimum concentration exists for each ingredient. The effect of various emulsifiers is discussed.

ACCESSION NUMBER: 1956:14560 CAPLUS

DOCUMENT NUMBER: 50:14560

ORIGINAL REFERENCE NO.: 50:3001i,3002a-b

TITLE: Amines as activators for polymerization of butadiene and acrylonitrile in emulsion  
AUTHOR(S): Fordham, J. W. L.; Williams, H. Leverne  
CORPORATE SOURCE: Polymer Corp. Ltd., Sarnia, Can.  
SOURCE: Journal of Industrial and Engineering Chemistry  
(Washington, D. C.) (1955), 47(No. 9;Pt. 1), 1714-24  
CODEN: JIECAD; ISSN: 0095-9014  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

L1 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
AB A 50-fold increase of the rate of GR-S polymerization at 5°, necessary to make large-scale operation in a pipeline reactor possible, was achieved by the use of very active organic hydroperoxides in high concns. as catalysts and higher concns. of soap emulsifier and ferrous salt activator. Phenylcyclohexane hydroperoxide was the most active catalyst. tert-Butyl-isopropylbenzene hydroperoxide was almost as active. Ferrous pyrophosphate and ferrous silicate were the best activators. Na ethylenediaminetetraacetate in concns. of 1 part per 10,000 parts of monomers further increased the rate of polymerization. High rates were obtained with concns. of fat acid soap of the order of 7 parts per 100 parts of monomers, but double this concentration of rosin soap was not sufficient to give high rates unless 2-4 parts of fat acid soaps also were added.

ACCESSION NUMBER: 1954:58915 CAPLUS  
DOCUMENT NUMBER: 48:58915  
ORIGINAL REFERENCE NO.: 48:10370b-d  
TITLE: Superfast GR-S polymerization at 41°F  
AUTHOR(S): Miller, J. R.; Diem, H. E.  
CORPORATE SOURCE: B. F. Goodrich Chem. Co., Akron, O.  
SOURCE: Journal of Industrial and Engineering Chemistry  
(Washington, D. C.) (1954), 46, 1065-73  
CODEN: JIECAD; ISSN: 0095-9014  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

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